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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/648,372	08/25/2000	Masahiro Yamamoto	4208.0083	5413

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EXAMINER	
BALI, VIKKRAM	

ART UNIT	PAPER NUMBER
2623	

DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/648,372	Applicant(s) YAMAMOTO, MASAHIRO	
	Examiner Vikram Bali	Art Unit 2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>13 & 14</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 20-24, 28-50 are rejected under 35 U.S.C. 102(b) as being anticipated by High speed template matching algorithm using information of contour points, by Hashimoto.

With respect to claims 20-22, Hashimoto discloses a matching system in that storage means, inputting means, detecting means, inspecting means for inspecting using the edge of the reference pattern and output means (see figure 2 and figure 7) as claimed.

With respect to claims 23-24, he further discloses dilating the edge, (see figure 7, dilated image memory and page 80 section 2.2) as claimed.

With respect to claims 28-29, he further discloses matching (see page 81, section 3.1) as claimed.

With respect to claims 30-31, he further discloses the correspondence of the edge considering the distances, (see page 80 col. 1, first two paragraphs step 2 and step 3) as claimed.

With respect to claims 32-38, he further discloses the steps of the matching in section 3.1 on pages 81-82, as claimed.

With respect to claims 39, he further discloses the luminance values in a profile, (see page 80 col. 1, paragraph 2, step 3 the image includes intensity i.e. luminance values) as claimed.

Claims 40 and 44 are rejected for the same reasons as set forth in the rejection of claim 20 because claims 40 and 44 are claiming similar subject matter as claim 20.

Claims 41 and 45 are rejected for the same reasons as set forth in the rejection of claim 22 because claims 41 and 45 are claiming similar subject matter as claim 22.

Claims 42 and 46 are rejected for the same reasons as set forth in the rejection of claim 30 because claims 42 and 46 are claiming similar subject matter as claim 30.

Claims 43 and 47 are rejected for the same reasons as set forth in the rejection of claim 39 because claims 43 and 47 are claiming similar subject matter as claim 39.

With respect 48-50, he further discloses converting the data to the reference data, (see figure 7 and paragraph connecting pages 82-83) as claimed.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over High speed template matching algorithm using information of contour points, by Hashimoto in view of Aoyama (US 5398292).

With respect to claims 25-27 Hashimoto discloses the invention substantially as disclosed and as described in claim 22. However, he fails to explicitly disclose the sum of product process. Aoyama disclose the sum of product process in doing the mask inspection. Therefore, it would have been obvious to one ordinary skilled in the art at the time of invention to combine the two references as they are analogous because they are solving the similar problem of mask inspection. And using the sum of product process in the Hashimoto process of inspection provides an edge detection process that is capable of determining the direction of each edge with high accuracy without being affected by noise (see col. 2, lines 58-62 of Aoyama).

Response to Arguments

5. Applicant's arguments with respect to new claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

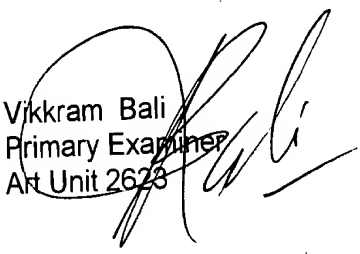
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vikkram Bali whose telephone number is 703.305.4510. The examiner can normally be reached on 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703.308.6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Application/Control Number: 09/648,372
Art Unit: 2623

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vikkram Bali
Primary Examiner
Art Unit 2623



vb
May 27, 2004